maintain their capability to perform mitosis and are capable of differentiating into substantially only a single type of neurons selected from the group consisting of dopaminergic, cholinergic, GABAergic, and serotonergic neurons upon contact of the synthetic tissue with a differentiation-promoting factor, wherein the synthetic tissue does not comprise sufficient glial cells to provoke an immune response upon implantation of the synthetic tissue into a recipient.

45. The synthetic tissue of claim 44, wherein more than 90% of cells in the synthetic tissue are the progenitor cells.

46. The synthetic tissue of claim 45, wherein more than 95% of cells in the synthetic tissue are the progenitor cells.

47. The synthetic tissue of claim 44, wherein the mammal is a human.

48. The synthetic tissue of claim 47, wherein the human is an adult.

49. The synthetic tissue of claim 47, wherein the human is an embryo.

50. The synthetic tissue of claim 47, wherein the progenitor cells are obtained from umbilical cord blood.

51. The synthetic tissue of claim 47, wherein the progenitor cells are obtained from either the subventricular region or the hippocampal region of the brain.

52. The synthetic tissue of claim 44, wherein the synthetic tissue is derived from a monoclonal cell line.

53. The synthetic tissue of claim 44, wherein the synthetic tissue is made by contacting neuronal progenitor cells obtained from the brain or spinal cord tissue with a differentiation-promoting factor in order to render them partially-differentiated.

54. The synthetic tissue of claim 53, wherein the factor is selected such that the partially-differentiated neuronal progenitor cells differentiate substantially only into dopaminergic neurons.

55. The synthetic tissue of claim 53, wherein the factor is selected such that the partially-differentiated neuronal progenitor cells differentiate substantially only cholinergic neurons.

56. The synthetic tissue of claim 53, wherein the factor is selected such that the partially-differentiated neuronal progenitor cells differentiate substantially only GABAergic neurons.

57. The synthetic tissue of claim 53, wherein the factor is selected such that the partially-differentiated neuronal progenitor cells differentiate substantially only serotonergic neurons.

58. The synthetic tissue of claim 44, wherein the factor is a growth factor.

59. The synthetic tissue of claim 44, wherein the factor is a cytokine.

60. The synthetic tissue of claim 44, wherein the factor is a neurotransmitter.

61. The synthetic tissue of claim 44, wherein the factor is a conditioned cell culture medium.

62. The synthetic tissue of claim 44, wherein the factor is an extracellular matrix of a human tissue.

63. A synthetic neuronal tissue derived from a brain or spinal cord tissue of a mammal, wherein the synthetic tissue comprises partially-differentiated neuronal progenitor cells that maintain their capability to perform mitosis and are capable of differentiating into substantially only a single type of neurons selected from the group consisting of dopaminergic,

cholinergic, GABAergic, and serotonergic neurons upon contact of the synthetic tissue with a differentiation-promoting factor,

wherein the synthetic tissue does not comprise sufficient glial cells to provoke an immune response upon implantation of the synthetic tissue into a recipient, and

wherein the synthetic tissue is obtained by a method comprising:

a) dissecting the brain or spinal cord tissue;

b) isolating neuronal progenitor cells from the brain or spinal cord tissue;

c) proliferating the progenitor cells;

d) partial differentiating the progenitor cells by transiently exposing the progenitor cells to a differentiation-promoting factor;

e) sub-cloning one of the partially-differentiated neuronal progenitor cells; and

f) proliferating the sub-cloned partially-differentiated neuronal progenitor cell, whereby a population of expanded, partially-differentiated neuronal progenitor cells that maintain their capability to perform mitosis is synthesized, the population being the synthetic tissue.

64. The synthetic tissue of claim 63, wherein the factor is selected from the group consisting of glial cell line-derived neurotrophic factor, leukemia inhibitory factor, interleukin-1, interleukin-11, and thyroid hormone.

65. The synthetic tissue of claim 63, wherein the factor is an extracellular matrix of a human tissue.

66. The synthetic tissue of claim 63, wherein the factor is selected from the group consisting of a cytokine, a growth factor, a neurotransmitter, and a cultured growth medium.

67. The synthetic tissue of claim 66, wherein the factor is a cytokine selected from the group consisting of leukemia inhibitory factor, ciliary neurotrophic factor, interleukin-1, interleukin-2, interleukin-3, interleukin-4, interleukin-5, interleukin-6, interleukin-7, interleukin-8, interleukin-9, interleukin-10, interleukin-11, interleukin-12, interleukin-13, interleukin-14, interleukin-15, interleukin-16, tumor necrosis factor-alpha, interferon-alpha, macrophage inhibitory factor, mitochondrial import stimulation factor, and retinoic acid.

68. The synthetic tissue of claim 66, wherein the factor is a growth factor selected from the group consisting of epidermal growth factor-1, epidermal growth factor-2, epidermal growth factor-3, transforming growth factor-alpha, transforming growth factor-beta, LIN-3, fibroblast growth factor-1, fibroblast growth factor-2, nerve growth factor, brain-derived neurotrophic factor, neutrophine-3, neutrophine-4, neutrophine-5, neutrophine-6, insulin-like growth factor-1, insulin-like growth factor-2, glial cell line-derived neurotrophic factor, neurturin, persephin, vascular endothelial growth factor, and platelet-derived growth factor.

69. The synthetic tissue of claim 66, wherein the factor is a neurotransmitter selected from the group consisting of dopamine, acetylcholine, GABA, glutamate, glycine, taurine, proline, noradrenaline, serotonin, substance P, and enkephalin.

70. The synthetic tissue of claim 63, wherein more than 90% of cells in the synthetic tissue are the partially-differentiated neuronal progenitor cells.

71. The synthetic tissue of claim 63, wherein the partial differentiation is performed more than once.

72. The synthetic tissue of claim 63, wherein at least one of the proliferation, partial differentiation, and sub-cloning steps is conducted at a sub-atmospheric oxygen level.

73. The synthetic tissue of claim 72, wherein the oxygen level is less than 10%.

74. The synthetic tissue of claim 72, wherein step c) is conducted at a sub-atmospheric oxygen level.

75. The synthetic tissue of claim 63, wherein at least one of the proliferation, partial differentiation, and sub-cloning steps is conducted at a condition which simulates reduced atmospheric oxygen content.

76. The tissue according to claim 75, wherein the condition is achieved using an inhibitor of mitochondrial respiration.

77. The synthetic tissue of claim 75, wherein step c) is conducted at a condition which simulates reduced atmospheric oxygen content.

78. The synthetic tissue of claim 63, in a serum-free medium.

79. A synthetic neuronal tissue that does not comprise sufficient glial cells to provoke an immune response upon implantation of the synthetic tissue into a recipient, the synthetic tissue made by transiently contacting in vitro i) neuronal progenitor cells obtained from a brain or spinal cord tissue of a mammal and ii) a differentiation-promoting factor for a period of time that is a) sufficient to render the progenitor cells capable of differentiating into substantially only a single type of neurons selected from the group consisting of dopaminergic, cholinergic, GABAergic, and serotonergic neurons upon contact of the synthetic tissue with a differentiation-promoting factor, and b) not sufficient to eliminate capability of the progenitor cells to perform mitosis.

80. The synthetic tissue of claim 79, wherein the progenitor cells and the differentiation-promoting factor are contacted for at least two hours.

81. The synthetic tissue of claim 79, wherein the progenitor cells are separated from the differentiation-promoting factor after at least two hours.